

**Amendments to the claims**

1. (original) A method of forming an interferometer film for an interferometer sensor comprising the step of forming a polymer layer of substantially uniform thickness directly on an interferometer substrate, the layer forming the interferometer film, wherein the polymer layer is deposited by polymerisation of a gas of monomer particles including a para-xylylene.
2. (original) A method according to claim 1, further comprising, prior to the polymerisation, the step of forming a gas of monomer particles in a first chamber at a first pressure and a first temperature and coupling the gas of monomer particles to a deposition chamber.
3. (original) A method according to claim 2, wherein the substrate is placed in the deposition chamber and, at a second pressure and second temperature, monomer particles polymerise on the substrate.
4. (original) A method according to claim 3, wherein the second temperature is the ambient temperature.
5. (previously presented) A method according to claim 2, in which the deposition chamber has an internal pressure of less than 20Pa.
6. (previously presented) A method according to claim 1, in which the substrate is the cleaved end of an optical fibre.
7. (currently amended) An interferometer sensor comprising an interferometer substrate and a parylene polymer film of substantially uniform thickness, in which the parylene film is formed directly on the interferometer substrate, a partially reflective surface being defined at the interface between the parylene film and the substrate.

8. (previously presented) A sensor according to claim 7, in which the parylene film is formed by a method comprising the step of forming a polymer layer of substantially uniform thickness directly on said Interferometer substrate, the layer forming the interferometer film, wherein the polymer layer is deposited by polymerisation of a gas of monomer particles including a para-xylylene.

9. (Previously presented) Medical analysis equipment having an interferometer sensor assembly comprising:

- an interferometer sensor according to claim 7;
- an interrogation source to provide an interrogation signal to the sensor; and
- a detector to detect signals received from the sensor.

10. (New) Medical analysis equipment having an interferometer sensor assembly comprising:

- an interferometer sensor according to claim 8;
- an interrogation source to provide an interrogation signal to the sensor; and
- a detector to detect signals received from the sensor.